

A NEW SPECIES OF THE GENUS *COELOTES* (ARANEAE, AGELENIDAE) FROM THE YAEYAMA ISLANDS, OKINAWA PREFECTURE, JAPAN

By

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Synopsis

SHIMOJANA, Matsuei (Urasoe Senior High School, 130 Uchima, Urasoe-shi, Okinawa Prefecture): A new species of the genus *Coelotes* (Araneae, Agelenidae) from the Yaeyama Islands, Okinawa Prefecture. *Acta arachnol.*, 30: 75-82 (1982).

A new species of the genus *Coelotes* from the Yaeyama Islands of Okinawa Prefecture is described under the name of *Coelotes yaeyamensis*. The present species resembles *Coelotes insidiosus* L. KOCH, 1878 known from Japan (from Kyushu to Hokkaido) and Korea, but the former is distinguished from the latter by the shapes of the embolic conductor of the male palp and the internal genitalia of the female.

No spider of the genus *Coelotes* from the Yaeyama Islands has been recorded up to now. I visited the Yaeyama Islands in October 1972, and obtained several spiders of the genus *Coelotes*. The result of my study shows these individuals are of the same species, which seems to be new to science. In this paper, this new species will be described under the name of *Coelotes yaeyamensis*.

The holotype and one of the paratypes of the new species are deposited in the collection of the Arachnological Society of East Asia, the remainder of the paratypes is preserved in my collection.

Before describing the species, I wish to express my hearty thanks to Prof. Takeo YAGINUMA, Otemon Gakuin University, for his cordial advice and kindness in reading the original manuscript. I also wish to express my appreciation to Associate Prof. Yoshiaki NISHIKAWA, Otemon Gakuin University, for his kindness in giving me specimens of *Coelotes insidiosus* and *C. interunus* for comparative study.

Coelotes yaeyamensis sp. nov.

(Japanese name: Yaeyama-yachigumo)

(Figs. 1-5, 9-11)

MALE (Holotype). Total length 6.09 mm; cephalothorax 3.17 mm long, 2.23 mm wide; abdomen 2.92 mm long. The ratio in width of cephalic region to that of thoracic region 10:17. Both sides of head subparallel to each other. Cephalic region with some fine hairs which do not extend into the thoracic region. Ocular area with some short bristles. The eye-group occupies a half the width of the cephalic region, the ratio in width of eye area to that of the head 7:13. Two rows of eight eyes, seen from above, slightly recurved, but seen from in front anterior eye row slightly procurved. Anterior eye row a little narrower than the posterior one. AME separated from each other by one-third the diameter of AME and from the ALE by one-third the diameter of the ALE. PME are separated from each other by two-third the diameter of PME and from PLE by the diameter of AME. Order of eyes in diameter, $AME < PLE < ALE = PME$. MOA wider than long 14:10 in ratio. The height of clypeus about twice as long as the diameter of PME. Radial and median furrows distinct. Basal segment of chelicera swollen, the length about one-third the carapace. Lateral condyle present. Retromargin of fang furrow with five teeth, promargin with six teeth, the basal one the smallest. Maxilla longer than wide, the length one and a half the width. Lateral margins of maxilla straight and parallel. Distal margin with scopula. Labium wider than long 13:10 in ratio. Anterior margin evenly curved. Basal notch distinct. Sternum shield-shaped, slightly longer than wide. Anterior margin straight, lateral margins gently undulated. Posterior process sharp, separating coxae IV by a quarter width of a coxa.

Patella of palp with a strong projection as shown in Fig. 5. Tibia with two processes on the prolateral surface, upper one larger as in Figs. 2 and 5. The palp of male with the long fine embolus as in Figs. 2-3. Palp with a tapering embolic conductor, and is extremely curved towards the projection of palpal patella.

Abdomen oval, longer than wide. Dorsum of abdomen covered with short fine hairs. Abdominal pattern indefinite. Lateral portion of abdomen with many black spotted flecks. Anterior spinnerets short and stouter than the posterior

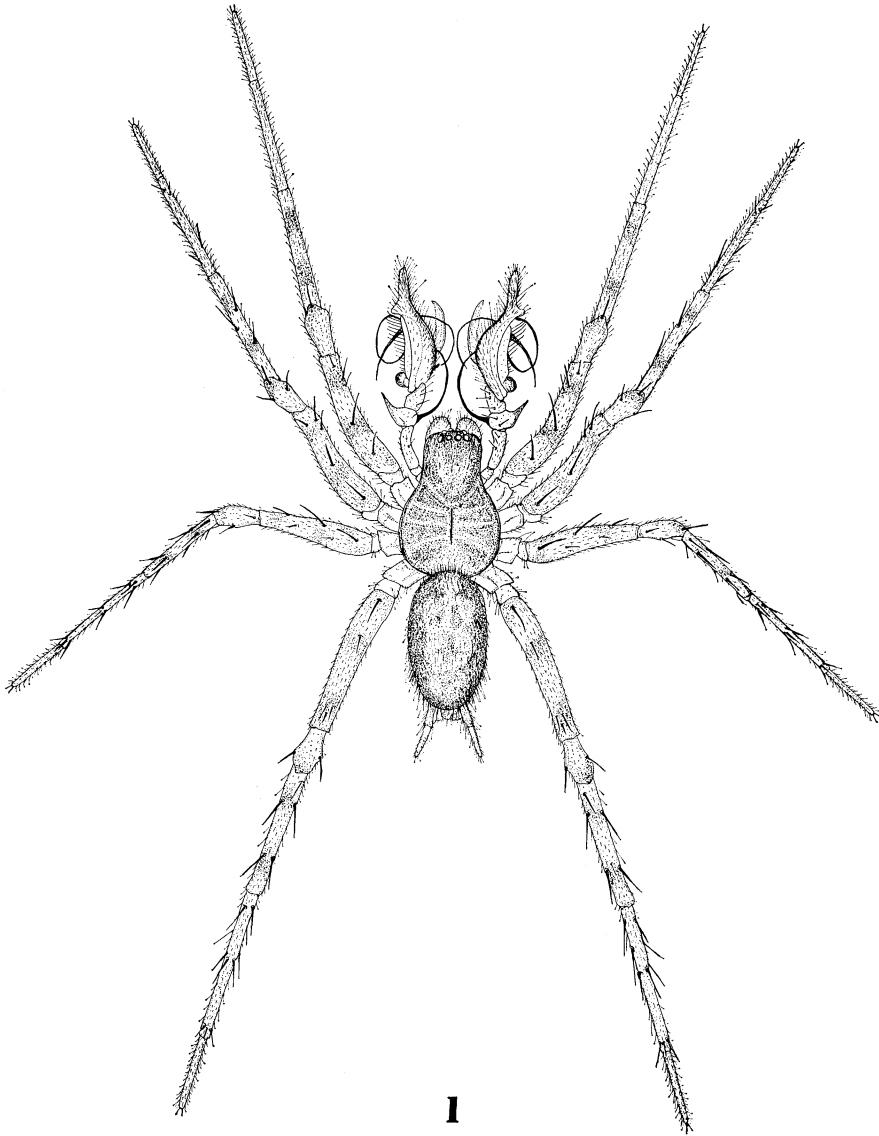
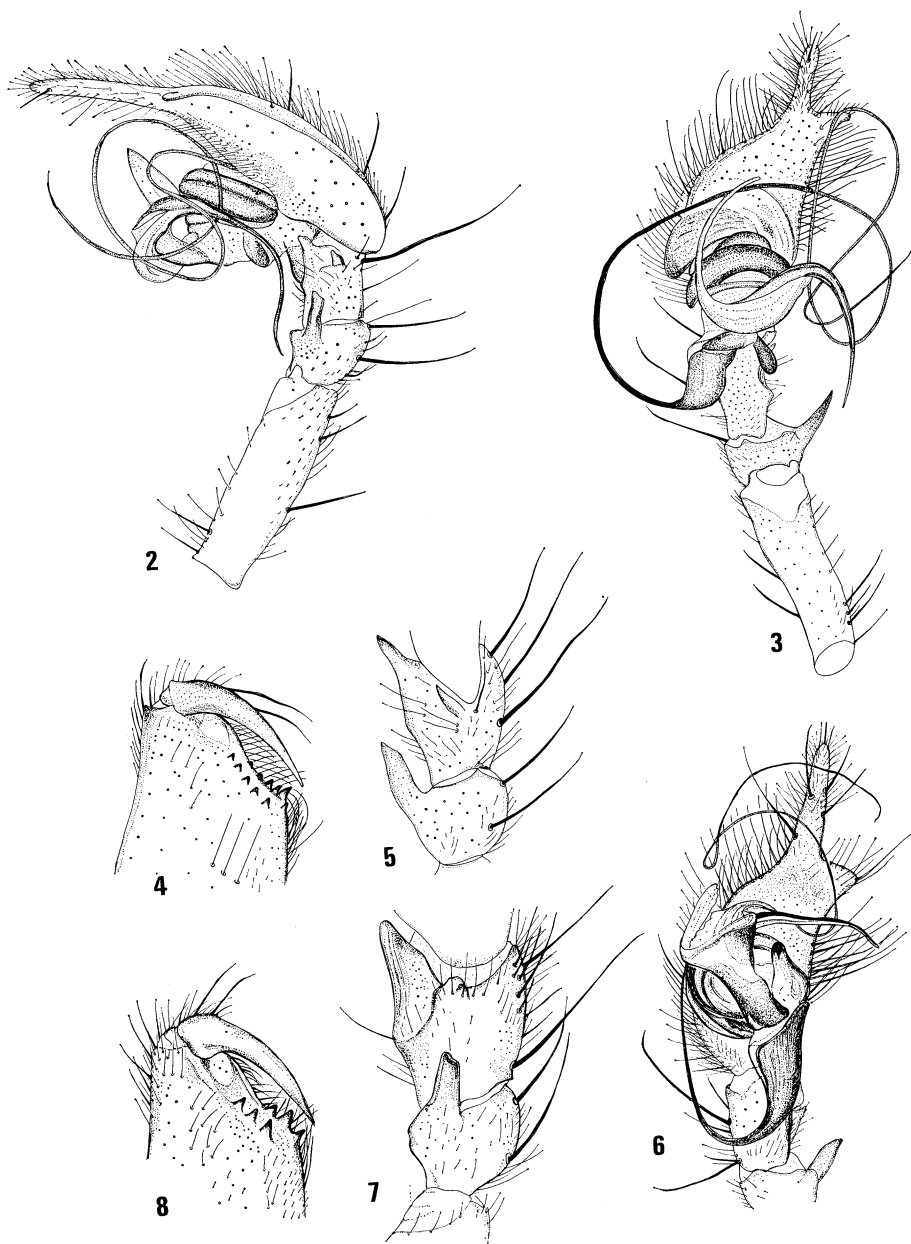


Fig. 1. *Coelotes yaeyamensis* sp. nov., Male, dorsal view.

ones. Posterior spinnerets elongated, apical segment about twice as long as basal one. Anterior portion of spinnerets with paired blackish flecks and transverse band.



Legs slender and covered with fine hairs. Measurements of right legs are as follows (mm):

Leg	Fem.	Pat. & Tib.	Met.	Tar.	Total
I	2.88	3.60	2.59	1.51	10.58
II	2.66	3.13	2.41	1.37	9.57
III	2.34	2.38	2.30	1.33	8.35
IV	3.24	3.78	3.31	1.62	11.95

Leg formula 4 1 2 3. Ventral spines on legs: tibia, 2-2-2; metatarsi, I & II, 2-2-1, III & IV, 2-2-2. Femoral spines as in Fig. 1.

Color: Cephalothorax and abdomen grayish black. Chelicera, maxilla and labium yellowish brown, distal part of chelicera darker. Sternum light yellow. Legs light yellow becoming darker distally, with three light grayish ring flecks on each femur, and with two light grayish ring flecks on each tibia. Distal part of venter of each coxa with an irregular light grayish fleck.

FEMALE (Paratype). Total length 8.6 mm. Cephalothorax 3.6 mm long, 2.4 mm wide; abdomen 5 mm long. Quite similar to male in form and color, but larger. Ratio in width of cephalic region to thoracic region 5: 8.

Measurements of right legs are as follows (mm);

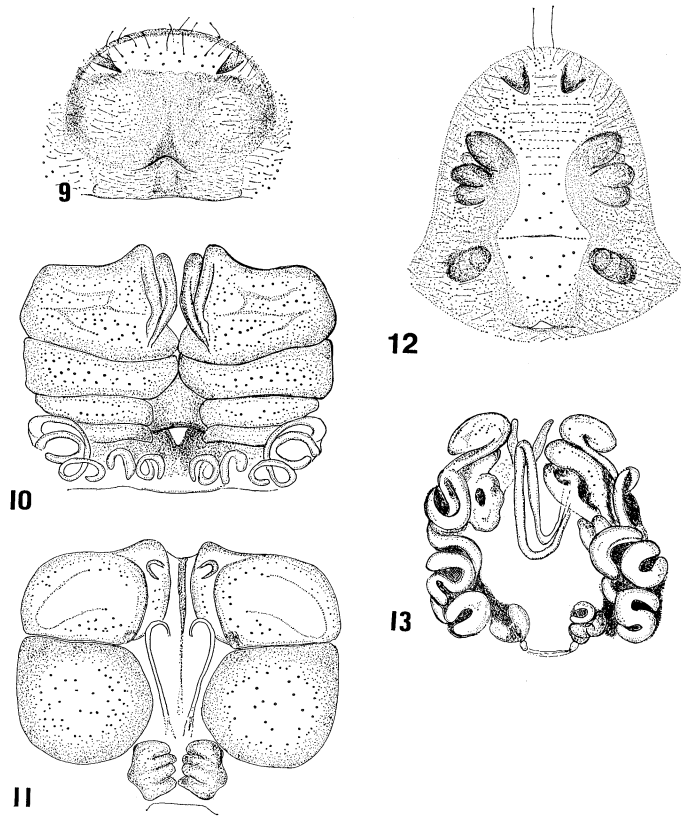
Leg	Fem.	Pat. & Tib.	Met.	Tar.	Total
I	2.70	3.31	2.23	1.29	9.53
II	2.45	2.70	2.02	1.15	8.32
III	2.34	2.66	1.98	1.08	8.06
IV	3.06	3.74	3.02	1.30	11.12

Leg formula 4 1 2 3. Epigynum wider than long, with two triangular processes along the posterior margin. Epigynum and genitalia are shown in Figs. 8-10.

Type-series. Holotype: 1 ♂, 26-X-1972, Banna-dake, 200 m-240 m alt., Ishigaki City, Okinawa Prefecture, M. SHIMOJANA leg.; paratypes: 3 ♀, same data as holotype, M. SHIMOJANA leg.; 1 ♂, 2 ♀, 24-X-1972, Ootomi, 180 m-240 m alt.,

Figs. 2-5. *Coelotes yaeyamensis* sp. nov., Male, holotype. 2. Male palp, ectal view. 3. Male palp, ventral view. 4. Male chelicera, internal view. 5. Patella and tibia of male palp.

Figs. 6-8. *Coelotes insidiosus* L. KOCH, Male, from Aichi prefecture. 6. Male palp, ventral view. 7. Patella and tibia of male palp, ectal view. 8. Male chelicera, internal view.



Figs. 9-11. *Coelotes yaeyamensis* sp. nov., Female, one of the paratypes. 9. Epigynum, ventral view. 10. Genitalia, ventral view. 11. Genitalia, dorsal view.

Figs. 12-13. *Coelotes insidiosus* L. KOCH, Female, from Shizuoka Prefecture. 12. Epigynum, ventral view. 13. Genitalia, dorsal view.

Taketomi-cho (Iriomote-jima), Okinawa Prefecture, M. SHIMOJANA leg.

Habitat: This new species is found among dead leaves, under decayed wood or stones in the forest.

Distribution: Ishigaki-jima and Iriomote-jima (The Yaeyama Islands), Okinawa Prefecture, Japan.

Remarks: This new species resembles *Coelotes insidiosus* L. KOCH, 1878 in form, but the former is distinguished from the latter by the structure of male palp, epigynum and genitalia of female. Male embolic conductor of this new species long, tapered and extremely curved towards the projection of palpal patella (Figs. 2-3), but in *C. insidiosus* the conductor is not curved as in *C.*

yaeyamensis sp. nov. (Fig. 6). In this new species, epigynum wider than long, and a pair of triangular processes over epigynum plate situated widely apart from each other as in Fig. 9. But in *C. insidiosus*, epigynum longer than wide, and two processes situated closely side by side as in Fig. 12. In female of *C. insidiosus* genitalia visible through the skin (Fig. 12). The structure of genitalia of this new species is clearly different from that of *C. insidiosus* (Figs. 10, 11 and 13).

Furthermore, this new species is distinguished from *C. insidiosus* by the following characteristics: in the former species retromargin of fang furrow bears four or five teeth (Fig. 4), while in the latter three or four (Fig. 8); dorsum of cephalothorax of the former provided with a few fine hairs, but the latter with many fine hairs on its whole area; the shapes of projection of male palpal patella and tibia of both species differs from each other as in Figs. 2, 5 and 7; tip of the median apophysis of this new species is not divided (Fig. 3), but in *C. insidiosus* it is divided into two.

This new species can be distinguished from *Coelotes insidiosus* or the other known species of *Coelotes* which occur in Japan and Korea by the structure of male palp, epigynum and genitalia of female.

摘 要

下謝名松栄 (浦添高等学校, 〒901-21 沖縄県浦添市字内間 130): 八重山諸島産ヤチグモ属の 1 新種。

沖縄県八重山諸島産ヤチグモ属 *Coelotes* の 1 種を新種 *Coelotes yaeyamensis* (ヤエヤマヤチグモ) として記載した。本種は九州から北海道および韓国にかけて広く分布する *Coelotes insidiosus* L. KOCH (シモフリヤチグモ) に類似するが、両種は雄の触肢の embolic conductor, 雌の epigynum と genitalia の形態により識別される。

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